REMARKS

The Office Action dated November 16, 2006 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-26 have been added to more particularly point out and distinctly claim the subject matter which is the invention. Claims 27 and 28 have been cancelled without disclaimer or prejudice. Claims 29-34 have been added. No new matter has been added, and no new issues are raised which require further consideration and/or search. Claims 1-26 and 29-34 are submitted for reconsideration.

Claims 1-18 and 22-28 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Publication No. 2002/0019231 to Palenius (hereinafter Palenius) in view of U.S. Patent No. 6,041,235 to Aalto (hereinafter Aalto). According to the Office Action, Palenius teaches all of the elements of claims 1-18 and 22-28 except for teaching that the selected measurement set of cell sent in the command from the access network to the terminal is ordered based upon information based upon a plurality of parameters associated with the base station. Thus, the Office Action combined Palenius and Aalto to yield all of the elements of claims 1-18 and 22-28. The rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in claims 1-18 and 22-28 and newly added claims 29-34.

Claim 1, upon which claims 2-17, 22 and 25-26 depend, recites a method including providing information associated with a plurality of communication means in a communications system to a network element of the communications system. The information is based on a plurality of parameters associated with each of a plurality of communication means for serving a mobile station, wherein the plurality of parameters includes at least a service priority weight. The method also includes ordering the communication means based on the information and performing compressed mode measurements at the mobile station based on the ordering, the measurements for selecting a communications means of the plurality of communications means.

Claim 18 recites a communications system including a network element, a mobile station and a plurality of communication means, the communication means being arranged to provide communication services to the mobile station. The communications system also includes means for providing information associated with the plurality of communication means to the network element, the information being based on a plurality of parameters associated with each of the plurality of communication means, wherein the plurality of parameters includes at least a service priority weight. The communications system further includes means for ordering the communication means being based on the information. The mobile station is arranged to perform compressed mode measurements based on the ordering for selecting one of the plurality of communication means.

As outlined below, the cited references of Palenius and Aalto do not teach or suggest the combination of features recited in the presently pending claims.

Palenius discloses a method for the handover of a terminal in a cellular communication system with base stations for providing connections to terminals in at least one cell (C) served by the base station. A terminal (UE) has a memory for identifying a measurement set of cells and measures quantities of the cells (C) identified in the measurement set. The decision (46, 72) of a handover of a terminal (UE) to a further connection is executed according to the measured quantities. A classification (22, 62) is performed if the execution of a handover is urgent. The number of cells (C) identified in the measurement set is reduced to a defined number if the handover is classified as urgent and the number of cells (C) identified is larger than the defined number. See at least the Abstract of Palenius.

Aalto discloses a handover method and arrangement in which a mobile station measures the reception level and the quality of the signal in the serving cell as well as the level of the signal of adjacent cells. The mobile station transmits the measurement results to a fixed network, which determines the need for handover, and, with the aid of the measurement results, selects at least one adjacent cell as a candidate cell for handover. The handover algorithm has been adapted based on the measurement results to estimate the interference level, such as the C/I ratio, in the candidate cell and select the candidate cell for handover so that the possibility of handover to a cell with a high interference level is diminished. Interference level is also used as a criterion in intra-cell handovers. See at least the Abstract of Aalto.

As noted above, Applicants submit that the combination of Palenius and Aalto does not teach or suggest the combination of features recited in the presently pending claims. Each of claims 1, 18, 31 and 33 in part, recites that the plurality of parameters, upon which the information used to order the communication means is based, includes at least a service priority weight. Each of claims 29, 30, 32 and 34 also recites, in part, that the communication means are ordered to provide a prioritized indication of the order that compressed mode measurements should be performed in; that this prioritized indication is reordered by taking into account the signal strengths of the plurality of communication means; and that the selection is for a handover.

Embodiments of the present invention relate to the handover of a mobile station from one cell to another. The mobile station designates a neighboring cell to which handover occurs. In embodiments of the present invention information associated with each neighboring cell is collected. An algorithm uses this information to calculate a weighting value for each neighboring cell. The neighboring cells are then ordered according to their weighting values. The neighboring cells may be reordered depending on their signal strengths received by the serving cell. The mobile station then performs further compressed mode measurements on the neighboring cells with the highest priority in order to select the neighboring cell for handover. Palenius and Aalto do not, however, select the neighboring cell to which handover occurs using the same method as recited in the presently pending claims.

Palenius describes a method for handover of a terminal, in which the number of neighboring cells on which the serving cell performs compressed mode measurements is dependent on the urgency of the handover. If the handover is classified as not urgent then compressed mode measurements are performed on all of the neighboring cells. If the handover is classified as urgent, then compressed mode measurements are performed on a restricted number of cells. However, Palenius does not teach or suggest that the neighboring cells are ordered based on information gathered about them, as recited in the presently pending claims. Palenius also does not teach or suggest that the compressed mode measurements are performed based on this order. Furthermore, Palenius does not disclose or suggest that information gathered about the neighboring cells is based on a plurality of parameters including at least a service priority weight, as recited in the presently pending claims. Palenius also does not disclose that the prioritized indication of the order is reordered according to the received signal strengths of the cells, and that compressed mode measurements are performed based on this reordered list, as recited in the presently pending claims.

Aalto does not cure the deficiencies of Palenius, as outlined above. Aalto describes a method for handover of a mobile station, in which a candidate cell for handover is determined based on the reception level and quality of signal in the serving cell. Aalto also does not teach or suggest performing compressed mode measurements at the mobile station, as recited in the presently pending claims. Furthermore, Aalto does not teach or suggest that information gathered about the neighboring cells is based on a

plurality of parameters including at least a service priority weight, as recited in the presently pending claims. Aalto also does not teach or suggest that the prioritized indication of the order is reordered according to the received signal strengths of the cells, and that compressed mode measurements are performed based on this reordered list, as recited in the presently pending claims.

Applicants submit that the combination of Palenius and Aalto does not teach or suggest that information gathered about the neighboring cells is based on a plurality of parameters including at least a service priority weight, as recited in the presently pending claims. The combination of Palenius and Aalto also does not teach or suggest that the prioritized indication of the order is reordered according to the received signal strengths of the neighboring cells, and that compressed mode measurements are performed based on this reordered list, as recited in the presently pending claims. Furthermore, neither Palenius nor Aalto mention or suggest using a service priority weight; thus, there is no motivation for one skilled in the art to include this feature recited in the presently pending claims into the combination of Palenius and Aalto. The combination of Palenius and Aalto also does not disclose or suggest using the signal strengths of the neighboring cells received by the serving cell to reorder the prioritized order, and perform compressed mode measurements based on this reordered list. Thus, Applicants respectfully assert that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Palenius nor Aalto, whether taken singly or combined, teach or suggest each feature of claims 1, 18, 19 and 39-24 and hence, dependent claims 2-17 and 20-26 thereon.

Claim 19 was rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Publication No. 2002/0068571 to Ohlsson (hereinafter Ohlsson) in view of U.S. Patent Publication No. 2004/0235479 to Lindquist (hereinafter Lindquist). According to the Office Action, Ohlsson discloses all of the elements of claim 19 except for teaching that statistics are collected on the handovers from a cell to a plurality of other cells and that these statistics are weighted. Thus, the Office Action combined the teachings of Ohlsson and Lindquist to yield all of the elements of claim 19. The rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in independent claim 19.

Claim 19, upon which claims 20-21 and 23 depend, recites a method including collecting statistics on the handovers from a cell in a communications system to a plurality of other cells in the communications system and weighting the cell load of each cell of the plurality of other cells by the percentage of handovers from the cell to respective one of the plurality of other cells. The method also includes determining a threshold based on the weighted cell loads, the threshold being for the cell.

As outlined below, the cited references of Ohlsson and Lindquist do not teach or suggest the combination of features recited in claim 19.

Ohlsson describes a dynamic offset threshold for starting a handover, which is based on the probability that the mobile station will engage in the handover. This probability is calculated using the handover history of other mobile stations previously and similarly traveling and of the same signal strength.

Lindquist describes a method of ranking a set of neighbor cells, associated with a first cell, for a handover. Lindquist discloses that for each cell member in the neighbor cell set, handover statistics on how frequent the cell member is involved in handover is registered. See paragraph 0047.

Applicants submit that the combination of Lindquist and Ohlsson does not teach or suggest the combination of elements recited in the presently pending claims. As acknowledged in the Office Action, Ohlsson does not teach or suggest collecting statistics on the handovers from a cell in a communications system to a plurality of other cells in the communications system, as recited in claim 19. Ohlsson also does not teach or suggest weighting the cell load of each cell of the plurality of other cells by the percentage of handovers from the cell to respective one of the plurality of other cells and determining a threshold based on the weighted cell loads, the threshold being for the cell, as recited in claim 19.

Lindquist does not cure the deficiencies of Ohlsson. Lindquist discloses that the method involves collecting statistics on the handovers from each cell of a plurality of other cells to the plurality of other cells. The present invention, on the hand, recites collecting statistics on the handovers from a cell in a communications system to a plurality of other cells in the communications system. In paragraph 0048, Lindquist ranks (weights) the neighbor cells, at least, in part, dependent on the handover statistics. Lindquist does not teach or suggest weighting the cell load of each neighbor cell by the percentage of handovers from the cell to each other neighbor cell, as recited in claim 19.

Furthermore, in paragraphs 0049-0052 and figure 3B, Lindquist goes on to suggest using the rankings to select the cells upon which measurements are to be performed by the mobile station, in order to select the cells for handover. Lindquist does not teach or suggest using the ranking to determine the threshold, as recited in claim 19.

In addition, it would not be obvious to a person of ordinary skill in the art to combine the teachings of Lindquist and Ohlsson to yield all of the elements of claim 19. The aim of Ohlsson, as stated in paragraph 0018 is to provide a technique for expediting time-intensive handover activities, thereby reducing diversity handover delay. Ohlsson's approach to determining the threshold is with this aim in mind, rather than the problem of ensuring that the handover is to the most suitable cell. Lindquist is concerned with the selection of cells for handover. Lindquist, however, remains silent on the topic of threshold determination. At no point does Lindquist even mention that a threshold may be used. Thus, Applicants respectfully assert that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Ohlsson nor Lindquist, whether taken singly or combined, teach or suggest each feature of claim 19.

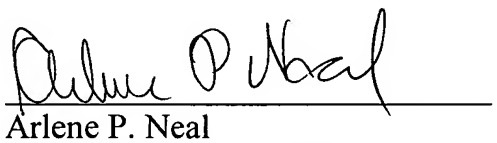
As noted previously, claims 1-26 and newly added claims 29-34 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 1-26 and 29-34 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by

telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Petition for Extension of Time
Additional Claim Fee Transmittal
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